



**Barry Kerns**

**Safety & Health Manager**

1919 S. State College Blvd., M.L. SC8389

Anaheim, CA 92806

Phone: 714-634-5024

Fax: 213-244-8155

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Mr. Michael Robertson, P. E.  
Gas Safety and Reliability Branch  
Consumer Protection and Safety Division (CPSD)  
California Public Utilities Commission  
320 W. Fourth Street, Suite 500  
Los Angeles, CA 90013

Dear Mr. Robertson,

The staff of the Gas Safety And Reliability Branch (GSRB) of the California Public Utilities Commission conducted a General Order (GO) 112-E audit of San Diego Gas and Electric Company's (SDG&E) Gas Distribution and Transmission Systems on November 14-18, 2011. The audit included a review of operations and maintenance records for the period of August 2010 through November 2011, an field inspection of various gas operation and maintenance related activities in SDG&E's Northeast, North Coast, Beach Cities Districts, and at Rainbow Compressor Station. The audit also reviewed SDG&E's Operator Qualification records, and included field observation of eight randomly selected individuals performing eight covered tasks.

Listed below are the two items you identified as violations of GO 112-E, Reference Title 49 Code of Federal Regulations (49 CFR), Part 192, and the measures taken to rectify and to minimize the possibility of reoccurrence.

### **Finding**

1. CFR part 192, Section 192. 736(b), states:

*"Except when shutdown of the system is necessary for maintenance under paragraph (c) of this section, each gas detection and alarm system required by this section must—*

- (1) Continuously monitor the compressor building for a concentration of gas in air of not more than 25 percent of the lower explosive limit; and*
- (2) If that concentration of gas is detected, warn persons about to enter the building and persons inside the building of the danger..."*

Your staff conducted a field inspection of Rainbow Compressor Station on November 16, 2011. You indicated the field crew demonstrated the operation of the gas detectors installed at compressor building #2. The duration of the demonstration was approximately 30 minutes. The crew made several attempts to set the alarm by injecting mobile gas at various test stations. Your

staff found that neither the visual nor the audio alarm was activated to warn persons inside or outside the building of the detection of gas in air concentration of 25 percent of the lower explosive limit.

### **Response**

During this test the Gas Detection system performed as designed. While the system was not alarming locally, it was still monitoring and providing alarms to our centralized Gas Control. The visual alarm did not function due to a dead short in a warning light, and the audible alarm did not function due to the operator's failure to reset the system properly as there was some confusion regarding the correct "reset" procedure. Both items have been corrected as indicated in our corrective actions below.

### **Corrective Action**

A thorough review of the gas detection system was conducted by operator qualified station personnel immediately following the demonstration. It was determined that there was a short in the lighting circuit causing one of the strobe lights not to function. The shorted wire was located and repaired, and one strobe light assembly was replaced. In addition, the following corrective actions were implemented:

- All operator qualified station personnel were given a refresher training on the system.
- The correct "reset" procedures were posted on the Gas Detection panel.
- The correct reset procedure was videoed and shown to station personnel.

### **Finding**

CFR part 192, Section 192.13(c), states:

*"Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part."*

You indicated that after the audit, your staff investigated further and discovered that the procedures used by the crew at the time of the field inspection had not been updated after a test panel was upgraded about 18 months ago prior to the audit. The new system had a different configuration and required a different test procedure, which was not available at the inspection.

You found that SDG&E's alarm log indicated that the alarm system was monitoring the gas concentration inside the compressor building during the entire inspections. However, you indicated that the outdated procedures caused the alarm system to fail to function as designed. You concluded that had someone entered or stayed inside the highly gas concentrated building, the individual would likely be subject to danger.

### **Response**

It is correct that the station's procedure related to the gas detection system was outdated.

**Corrective Action**

In addition to the corrective actions stated above in regards to training, the station procedures have been updated and revised to reflect the current equipment and operation of the gas detection system. Furthermore, a system wide review of all station plans and procedure documents has been implemented.

Please contact Jeff Koskie at (213) 305-8660 if you have any questions or need additional information.

Sincerely,

Barry Kerns

Cc: Mr. Jerry Palo, CPUC-Los Angeles  
Mr. Kan Tong, CPUC-Los Angeles